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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,806	08/30/2001	Andrew D. Bailey III	LAM1P124D1	4355

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EXAMINER

ALEJANDRO MULERO, LUZ L

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/943,806

Applicant(s)

BAILEY ET AL.

Examiner

Luz L. Alejandro

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 23,26,27,32,33 and 35-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23,26,27,32,33 and 35-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/1/03 has been entered.

### ***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
Non-initialed and/or non-dated alterations have been made to the oath or declaration **and** the declaration is illegible. See 37 CFR 1.52(c).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23, 26-27, 32-33, 35-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al., EP 0 837 489 A2 in view of Collins, U.S. Patent 6,572,732.

Collins et al. shows the invention substantially as claimed including a method for providing temperature control to a plasma processing chamber of a plasma processing apparatus, the method comprising: directly and indirectly measuring temperature internal to the plasma processing chamber 40 using a temperature sensor 76, for instance, to measure the temperature of the ceiling 52 and using a temperature sensor 79 to measure the temperature of the ring 62; comparing both of these temperatures to a target temperature (see page 12-line 54 to page 13-line 17); heating the plasma processing chamber by heating a thermal control block 74,75 that is thermally coupled and biased to the plasma processing chamber 40 (see page 13-line 55 to page 14-line 22); cooling the plasma processing chamber 40 by actively cooling the thermal control

block 74,75, wherein there are layers (thermal break element) in the block separating the heating element from the cooling element (see Figs. 17A-23); and wherein the thermal control block further include notches (1000, 1020) through which gas flows and which prevent RF energy from coupling with the thermal control block (see figs. 18-19).

With respect to claims 24, 34 and 39, note that the heating and cooling are provided through the same thermal control block 74,75. Regarding claims 25 and 40, note that the thermal control block include at least a heater element 75 and a cooling element 74 and said cooling is provided by the cooling element through the heating element (see figs. 18-19).

Collins et al. fails to expressly disclose a plurality of thermal control blocks. However, a prima facie case of obviousness exists because the duplication of parts have been held to have been obvious (see *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plurality of thermal control blocks in the apparatus of Collins et al. because this allows for better controllability over the process being conducted in the apparatus.

Collins et al. fails to expressly disclose that the plurality of thermal control blocks are located around the sides of the plasma processing chamber. However, a prima facie case of obviousness exists because the rearrangement of parts have been held to have been obvious (see *In re Japikse* 86 USPQ 70 (CCPA 1950)). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plurality of thermal control blocks in the apparatus of Collins et al.

because this allows for better controllability over the process being conducted in the apparatus.

Collins et al. does not expressly disclose that the cooling is provided by the cooling element through the heating element. Collins discloses a method for providing temperature control to a plasma processing chamber by which a cooling element 520 cools the chamber through heating element 510 (see figs. 26-29 and their descriptions). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Collins et al. as to performing the cooling through the heating element, as taught by Collins because this is a suitable method for controlling the temperature of the plasma chamber. Additionally, the particular arrangement of the cooling and the heating means, which will provide for the cooling through the heating member, would not lend patentability to the instant application absent the showing of unexpected results.

With respect to claim 43, apparatus limitations, unless they affect the process in a manipulative sense, have little weight in process claims. *In re Tarczy-Hornoch* 158 USPQ 141, 150 (CCPA 1968); *In re Edwards* 128 USPQ 387 (CCPA 1961); *Stalego v. Heymes* 120 USPQ 473, 478 (CCPA 1959); *Ex parte Hart* 117 USPQ 193 (PO BdPatApp 1957); *In re Freeman* 44 USPQ 116 (CCPA 1940); *In re Sweeney* 72 USPQ 501 CCPA 1947).

### ***Response to Arguments***

Applicant's arguments filed 4/1/03 have been fully considered but they are not persuasive.

In response to applicant's argument that Collins et al. fails to disclose preventing RF energy from coupling with a thermal control block, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Additionally, the oath/declaration objection previously noted, is respectfully maintained because the instant application requires initialed and dated alterations.

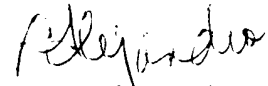
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 703-305-4545. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Luz L. Alejandro  
Primary Examiner  
Art Unit 1763

June 12, 2003